

	Document ID	Issue Date	Pag es	Title	Current OR	Current XRef
1	US 20040059978 A1	20040325	16	Reduced latency for recovery from communications errors	714/748	
2	US 20040010743 A1	20040115	21	Turbo encoded hybrid automatic repeat request system and error detection method	714/748	714/755; 714/784
3	US 20030126536 A1	20030703	10	Delay sensitive adaptive quality control loop for rate adaptation	714/748	
4	US 20030120990 A1	20030626	10	Method for modifying a bit sequence in an ARQ retransmission, receiver and transmitter therefor	714/748	
5	US 20030110436 A1	20030612	16	ARQ retransmission with reordering scheme employing multiple redundancy versions and receiver/transmitter therefor	714/748	
6	US 20030079169 A1	20030424	10	Automatic repeat request for centralized channel access	714/748	
7	US 20030072285 A1	20030417	9	Mimo hybrid-ARQ using basis hopping	370/335	714/748
8	US 20020199147 A1	20021226	28	Apparatus and method for transmitting and receiving data in a CDMA mobile communication system	714/748	
9	US 20020172208 A1	20021121	12	Hybrid automatic repeat request (HARQ) scheme with in-sequence delivery of packets	370/400	370/352; 370/394; 370/428; 714/748
10	US 20020120900 A1	20020829	7	Rate-matching algorithm for hybrid ARQ system	714/748	714/790
11	US 20020036986 A1	20020328	19	Method and apparatus for managing traffic flows	370/235	370/400; 709/225; 714/748
12	US 20020012337 A1	20020131	36	Wireless communications with efficient retransmission operation	370/349	370/473; 714/748
13	US 6700867 B2	20040302	18	Method and system for reduced memory hybrid automatic repeat request	370/216	370/317; 714/748
14	US 6697988 B2	20040224	13	Data transmission apparatus and method for an HARQ data communication system	714/752	714/748; 714/751
15	US 6694469 B1	20040217	14	Method and an apparatus for a quick retransmission of signals in a communication system	714/748	370/474; 375/358

	<b>Inventor</b>
1	Subrahmanya, Parvathanathan
2	Lee, Jae Hong et al.
3	Gollamudi, Sridhar et al.
4	Elbwart, Alexander Golitschek Edler Von et al.
5	Golitschek Edler Von Elbwart, Alexander et al.
6	Ho, Jin-Meng et al.
7	Onggosanusi, Eko N. et al.
8	Kim, Noh-Sun et al.
9	Malkamaki, Esa
10	Hong, Sung Kwon
11	Haarsten, Jacobus
12	Schmidl, Timothy M. et al.
13	Classon, Brian Keith et al.
14	Kim, Min-Koo et al.
15	Jalali, Ahmad et al.

	Document ID	Issue Date	Pag es	Title	Current OR	Current XRef
16	US 6678523 B1	20040113	8	Closed loop method for reverse link soft handoff hybrid automatic repeat request	455/442	370/331; 370/394; 455/436; 714/746; 714/748; 714/749
17	US 6671849 B2	20031230	11	Reliability-based type-II hybrid ARQ scheme	714/746	375/377; 714/748; 714/749
18	US 6658005 B2	20031202	9	Hybrid ARQ method for packet data transmission	370/394	370/524; 714/748
19	US 6625172 B2	20030923	16	Rescheduling scheduled transmissions	370/474	370/389; 714/748
20	US 6615382 B1	20030902	22	Method for controlling errors in link layer in wideband wireless communication and computer readable media therefor	714/748	
21	US 6557135 B1	20030429	21	Cycling through entirety of error-indicating acknowledgment	714/748	714/750
22	US 6522650 B1	20030218	74	Multicast and broadcast transmission with partial ARQ	370/390	370/445; 714/748
23	US 6421803 B1	20020716	12	System and method for implementing hybrid automatic repeat request using parity check combining	714/752	714/748; 714/751; 714/758; 714/776
24	US 6418549 B1	20020709	18	Data transmission using arithmetic coding based continuous error detection	714/811	714/748
25	US 6373842 B1	20020416	15	Unidirectional streaming services in wireless systems	370/394	714/748
26	US 6359877 B1	20020319	20	Method and apparatus for minimizing overhead in a communication system	370/349	370/232; 370/252; 370/389; 370/391; 370/394; 375/220; 709/237; 709/250; 714/748
27	US 6317418 B1	20011113	15	Method for transmitting packet switched data in a mobile communications system	370/278	370/277; 370/282; 370/913; 714/748; 714/799
28	US 6314541 B1	20011106	6	Method for computer-aided signaling in an automatic repeat request procedure	714/748	714/751

	Inventor
16	Ghosh, Amitava et al.
17	Tripathi, Vinayak et al.
18	Seidel, Eiko et al.
19	Odenwalder, Joseph P. et al.
20	Kang, Woo-shik et al.
21	Balachandran, Krishna et al.
22	Yonge, III, Lawrence W. et al.
23	Persson, Joakim et al.
24	Ramchandran, Kannan et al.
25	Coverdale, Paul et al.
26	Rathonyi, Bela Stefan Kazmir et al.
27	Raitola, Mika et al.
28	Seytter, Fritz et al.

	Document ID	Issue Date	Pag es	Title	Current OR	Current XRef
29	US 6301681 B1	20011009	23	Messaging communication protocol	714/751	714/748; 714/797
30	US 6301249 B1	20011009	30	Efficient error control for wireless packet transmissions	370/394	714/748
31	US 6292470 B1	20010918	9	Data transmission system and method utilizing history information corresponding to correctly received	370/252	370/395; 1; 714/748
32	US 6289003 B1	20010911	15	Method for transmitting packet switched data in a mobile communications system	370/278	370/277; 370/282; 370/912; 370/913; 714/748; 714/751
33	US 6247150 B1	20010612	9	Automatic retransmission with order of information changed	714/701	370/337; 714/748
34	US 6212240 B1	20010403	8	Method and apparatus for conveying data between communication devices	375/261	370/468; 714/18; 714/748; 714/749
35	US 6163869 A	20001219	4	Method of re-sending incorrectly transmitted data	714/748	714/798; 714/799
36	US 6163861 A	20001219	31	Error compensating method and apparatus and medium storing an error compensation program	714/712	375/219; 375/224; 714/748
37	US 6052812 A	20000418	23	Messaging communication protocol	714/751	714/748; 714/797
38	US 6014765 A	20000111	87	Data transmission apparatus and method	714/748	714/749
39	US 5983382 A	19991109	10	Automatic retransmission query (ARQ) with inner code for generating multiple provisional decodings of a data packet	714/744	370/260; 370/265; 370/352; 370/400; 370/402; 370/463; 714/703; 714/748; 714/753; 714/755
40	US 5968197 A	19991019	18	Method and apparatus for data recovery	714/748	714/797
41	US 5896394 A	19990420	19	Data structure, data communication method, apparatus and communication terminal apparatus	714/712	714/748; 714/751
42	US 5889790 A	19990330	29	Data communication method and data communication apparatus	714/748	714/18

	Inventor
29	Chen, Zongbo et al.
30	Mansfield, Carl et al.
31	Uota, Toshihiro
32	Raitola, Mika et al.
33	Niemela, Kari
34	Scheibel, Jr., Robert C. et al.
35	Langmann, Peter
36	Yoshioka, Masafumi et al.
37	Chen, Zongbo et al.
38	Maeda, Yasutoshi et al.
39	Pauls, Richard Joseph
40	Doiron, Timothy J.
41	Fukuda, Kunio
42	Fukuda, Kunio

	Document ID	Issue Date	Pag es	Title	Current OR	Current XRef
43	US 5799012 A	19980825	34	System controlled asymmetrical automatic repeat request protocol method	370/336	370/348; 370/349; 370/473; 455/509; 714/748
44	US 5719883 A	19980217	27	Adaptive ARQ/FEC technique for multitone transmission	714/751	370/216; 370/480; 714/748; 714/750; 714/774
45	US 5715257 A	19980203	19	System for re-transmission in data communication	714/748	
46	US 5701298 A	19971223	18	Automatic retransmission request	370/346	370/349; 714/748
47	US 5694391 A	19971202	19	Automatic retransmission request	370/346	714/748
48	US 5677918 A	19971014	13	Method and device for efficient error correction in a packet-switched communication system	714/748	370/321
49	US 5671156 A	19970923	40	Transmission method and system for JPEG images	714/52	370/476; 370/487; 375/295; 375/346; 455/91; 714/746; 714/748; 714/751
50	US 5629948 A	19970513	23	Data transmission scheme with automatic repeat request	714/748	714/750; 714/751
51	US 5563895 A	19961008	12	Digital mobil E radio communication system	714/748	
52	US 5559810 A	19960924	10	Communication of data reception history information	714/704	375/259; 375/267; 455/102; 714/708; 714/748; 714/751
53	US 5550847 A	19960827	22	Device and method of signal loss recovery for realtime and/or interactive communications	714/748	375/240. 13; 375/240. 17
54	US 5031179 A	19910709	74	Data communication apparatus	714/748	710/60; 714/708
55	US 5027356 A	19910625	10	Error control system	714/748	

	Inventor
43	Ayerst, Douglas I. et al.
44	Ayanoglu, Ender
45	Matsuki, Hideo et al.
46	Diachina, John Walter et al.
47	Diachina, John Walter et al.
48	Tran, Phieu Moc et al.
49	Weerackody, Vijitha et al.
50	Hagiwara, Junichirou et al.
51	Malkamaki, Esa et al.
52	Gilbert, Stephen S. et al.
53	Zhu, Qin-Fan
54	Yoshida, Takehiro et al.
55	Nakamura, Makoto et al.



	Document ID	Issue Date	Pag es	Title	Current OR	Current XRef
56	US 4947484 A	19900807	49	Protocol for network having a plurality of intelligent cells	714/776	714/748; 714/781
57	US 4622682 A	19861111	6	ARQ transmission system	375/285	178/69R; 714/748
58	US 4589111 A	19860513	8	Arq equipped data communication system	714/748	714/708
59	US 4584685 A	19860422	8	Method for improving message reception from multiple sources	714/751	714/748
60	US 4144522 A	19790313	18	Electro-control system for data transmission	714/748	

	<b>Inventor</b>
56	Twitty, William B. et al.
57	Kumakura, Kazumasa
58	Adachi, Eiichi
59	Gajjar, Jagdish T.
60	Kageyama, Satoshi et al.